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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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08/26/2005

Martin Vorbach

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26646

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06/01/2009

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EXAMINER

VICARY, KEITH E

ART UNIT

PAPER NUMBER

2183

MAIL DATE

DELIVERY MODE

06/01/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<p align="center">Advisory Action Before the Filing of an Appeal Brief</p>	<p>Application No. 10/501,845</p>	<p>Applicant(s) VORBACH ET AL.</p>	
	<p>Examiner Keith Vicary</p>	<p>Art Unit 2183</p>	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 19 May 2009 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☒ The Notice of Appeal was filed on 19 May 2009. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
(a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ They raise the issue of new matter (see NOTE below);
(c) ☒ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
The status of the claim(s) is (or will be) as follows:
Claim(s) allowed: _____.
Claim(s) objected to: _____.
Claim(s) rejected: _____.
Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☐ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.
12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____.
13. ☒ Other: See Continuation Sheet.

/Eddie P Chan/
Supervisory Patent Examiner, Art Unit 2183

Continuation of 3. NOTE: The following claim amendments raise new issues that would require further consideration and/or search. In claim 7: a) the newly added "FIFO" limitation which describes the register in lines 2-3. b) the "vector" limitation such that the memory stores at least one vector as opposed to at least one of a data stream and parts of the data stream. In claim 19: c) the newly added limitations regarding a predefined step in response to an exceedance by a configuration of the configuration's maximum allowed execution runtime.

Continuation of 13. Other: Applicant argues in the paragraph spanning pages 6 and 7 that claim 7 has been clarified to indicate that the data stream memory is one operated as a FIFO memory, as opposed to Smith's random-access memory devices. However, this clarification would require further search and/or consideration as noted above.

Applicant argues on page 7 that Gee merely provides for a maximum allotted time for a set of instructions, but does not disclose a maximum allotted time for a configuration. Applicant then makes various arguments regarding how a configuration does not correlate to a set of instructions; these are addressed in sequence below.

Applicant argues that "[a] configuration is of a function and/or interconnection of units for their use to execute instructions." Examiner first notes that this definition does not appear to be present in the instant disclosure or the instant claims. While this recitation is indefinite as it could mean multiple different things, examiner will subsequently read a configuration to be data which is used instead of an instruction in order to perform an operation. This interpretation is supported by both the instant application (page 7, "the traditional instruction is replaced by a configuration") and the Smith reference (e.g. col. 2, lines 4-8, which disclose that when an application is compiled, the functions of the application are partitioned into blocks of configuration data).

Given that applicant then argues that "[w]ith the setting of a maximum allotted time for an instruction or instruction set to which a configuration corresponds, the cited art does not suggest that there should also be set a maximum allotted time for the corresponding configuration. However, when a configuration directly correlates to some set of one or more instructions as it does in Smith, a maximum allotted time for that set of one or more instructions is necessarily also the maximum allotted time for the corresponding configuration.

Applicant argues that the cited art does not suggest contemplation of any need or benefit to such an additional or substitute maximum allotted time. However, as explained above, the examiner's combination does not entail any additional or substitute maximum allotted time. Rather, Smith teaches of replacing a set of one or more instructions with a configuration, and Gee teaches that a set of one or more instructions is assigned a maximum allotted time. The combination entails Smith's set of one or more instructions having a maximum allotted time. By definition, this maximum allotted time for the set of one or more instructions is necessarily the maximum allotted time for the configuration as well.

Applicant argues that the slices of Gee are not comparable to configurations. However, as noted above, a configuration corresponds to a set of one or more instructions. Moreover, Gee discloses in col. 3, line 54 that a slice is a partition. Gee discloses in col. 3, lines 44-45 that the partitions are of an application. Given that an application is comprised of program instructions, Gee's slices are thus comparable to a set of one or more instructions, and, as explained above, are thus also comparable to a configuration in the combination of Smith and Gee. In other words, Gee teaches of the desirability to prevent a set of one or more instructions from taking up too much time and keeping other instructions from running. This teaching is still clearly applicable regardless of whether the instructions are executed normally as software on a general-purpose microprocessor, or as configurations in a reconfigurable processor.

Applicant argues that configurations are for execution of instructions, so that the suggestion of a maximum allotted time for instructions would not further suggest a maximum allotted time to configurations which are for and correspond to those same instructions to which the maximum allotted time is already suggested to be set. However, in the environment wherein a configuration corresponds to a set of one or more instructions, a maximum allotted time for that set of one or more instruction necessarily is the same as a maximum allotted time for that configuration as well. In other words, the examiner is not arguing that an additional maximum allotted time for configurations is present in addition to the maximum allotted time for the instructions, but rather they are the same maximum allotted time.

Applicant argues that use of allotted maximum time to a configuration, in addition to or instead of one for the corresponding instructions, has not been contemplated by the prior art. However, examiner is not arguing that the allotted maximum time to corresponding instructions is being supplemented by allotted maximum time for the corresponding configuration, nor is examiner arguing that the allotted maximum time to corresponding instructions is being replaced by some other value which is representative of the allotted maximum time to corresponding configuration. Rather, the maximum allotted time for a set of one or more instructions also necessarily indicates the maximum allotted time for a configuration which corresponds to that set of one or more instructions.

Applicant argues on the paragraph spanning page 7 and 8 that the present application resolves a conflict which arises by it being highly preferable, on the one hand, to have configurations that run as long as possible due to lower configuration overhead, whereas, on the other hand, it is preferred to have a fast interrupt response time. However, these same considerations are analogous to Gee's considerations in implementing the watchdog timer for sets of instructions of the partition slices, and modifying these instructions to be configurations so that they can be implemented in reconfigurable hardware for performance reasons does not undermine the viability and motivation of Gee's teaching.

Applicant argues that the present application discusses how to handle loops if a maximum time is allotted to a configuration. However, there does not appear to be any limitations claimed regarding how to handle loops if a maximum time is allotted to a configuration.

KV